

# The multiple benefits of industrial energy efficiency policy – experience in Australia and Mongolia

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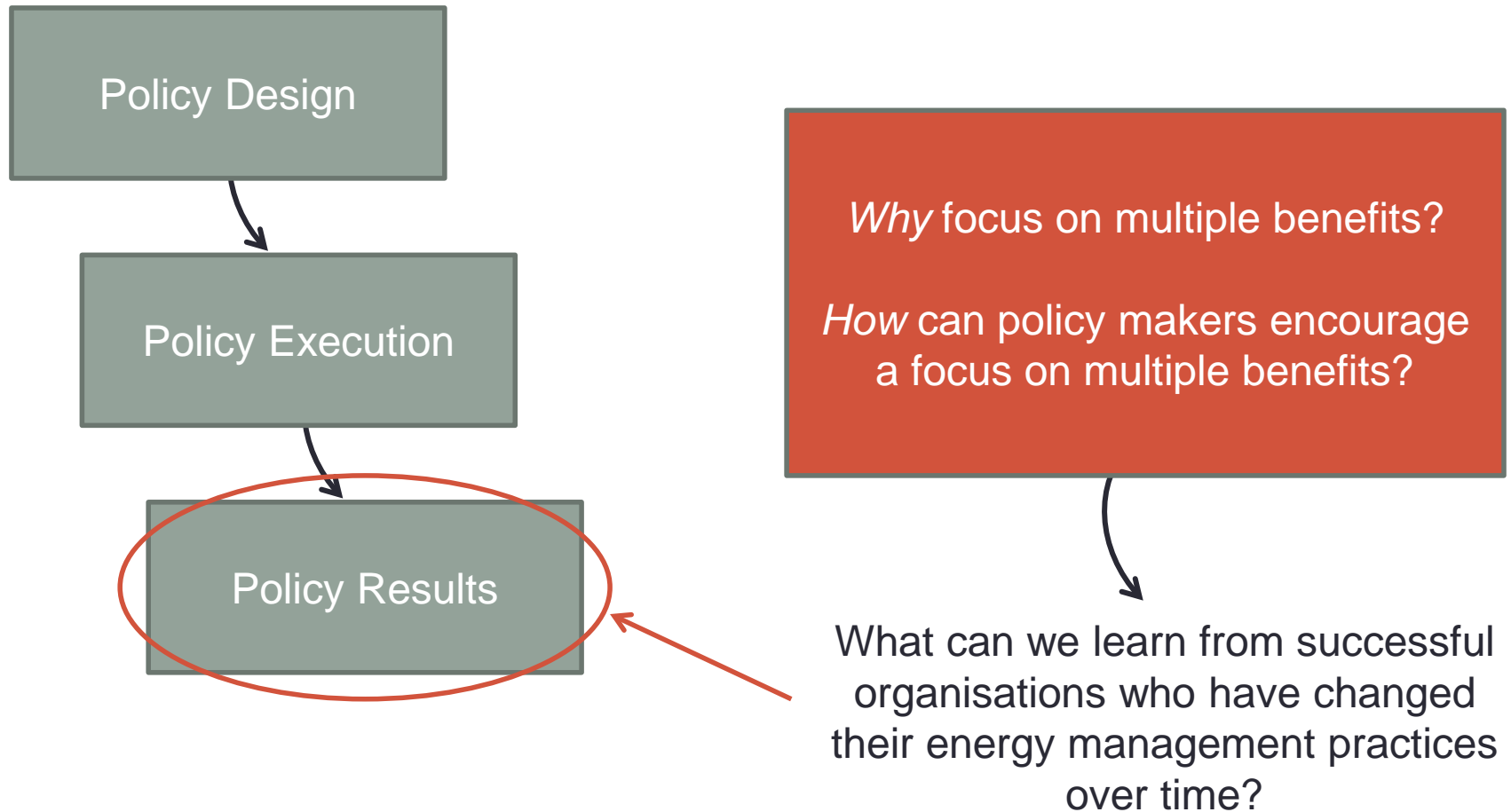
IEA Roundtable: Capturing the multiple benefits of energy efficiency

Session 3: The bigger picture on industrial energy efficiency impacts

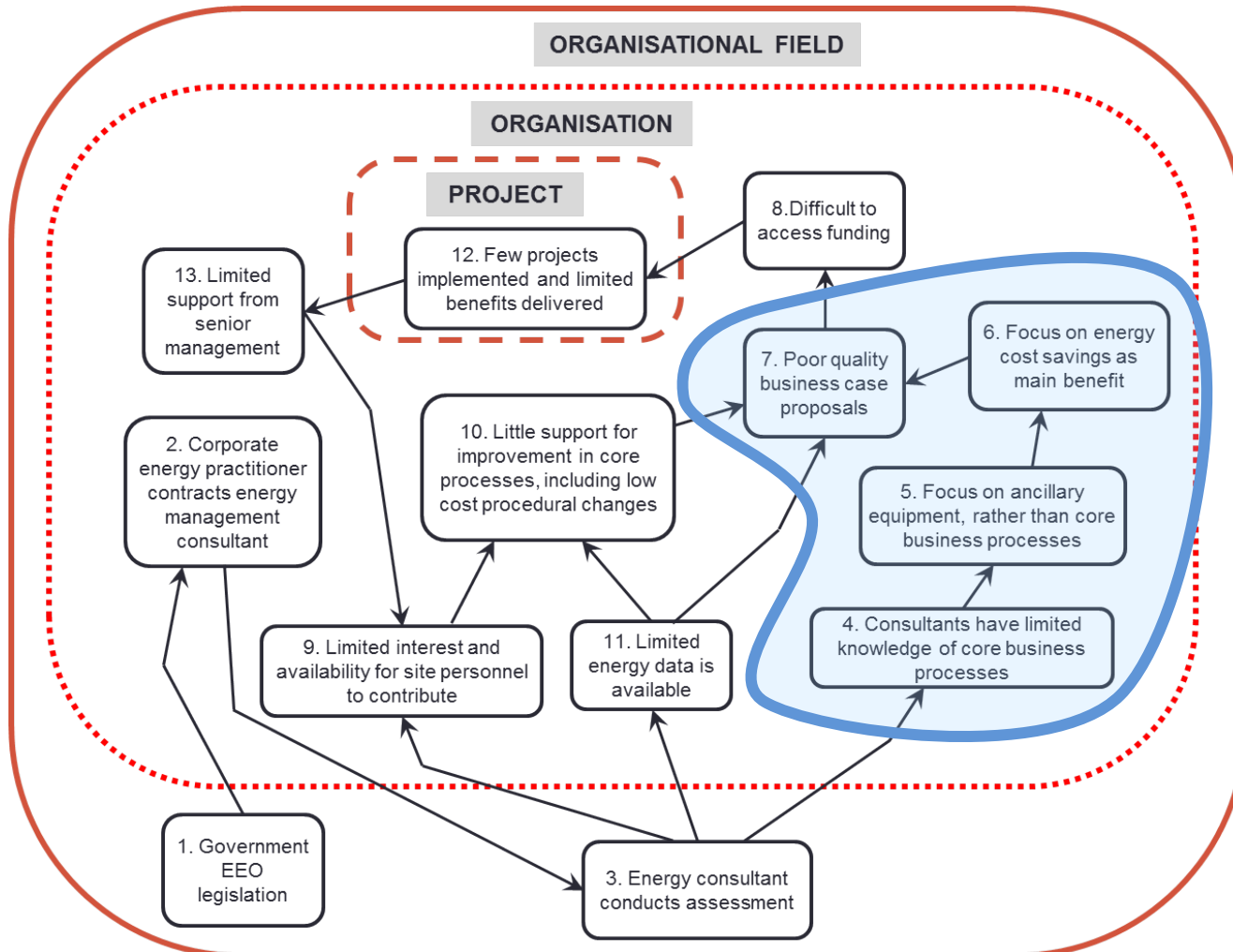
27 January, 2013



# Linking policy design, execution and results – Australian context



# Initial response by sample of 'leaders' to EEO legislation (commenced July 2006)

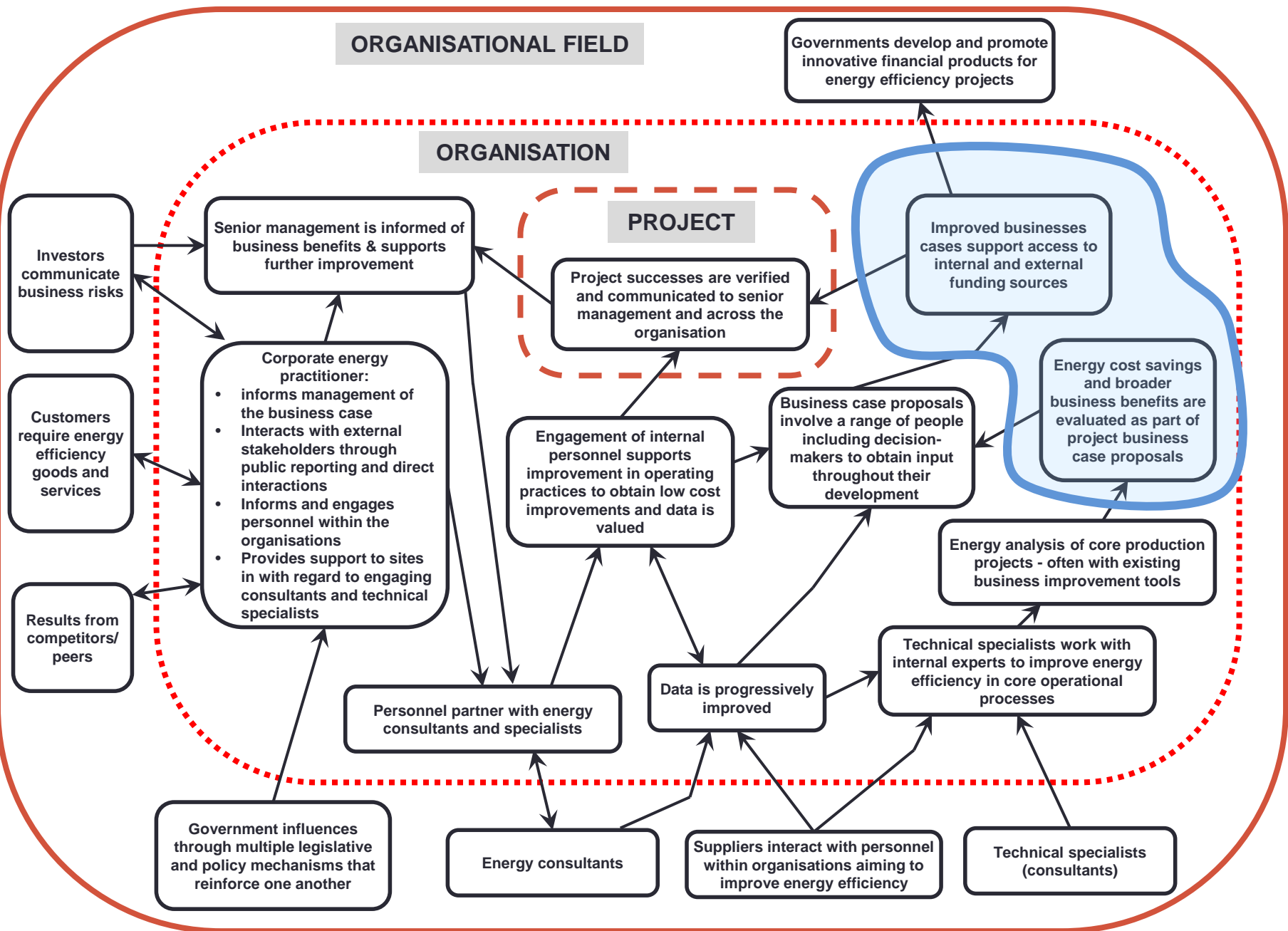


Established (Institutionalized) energy audit practices have limited focus on 'multiple benefits'

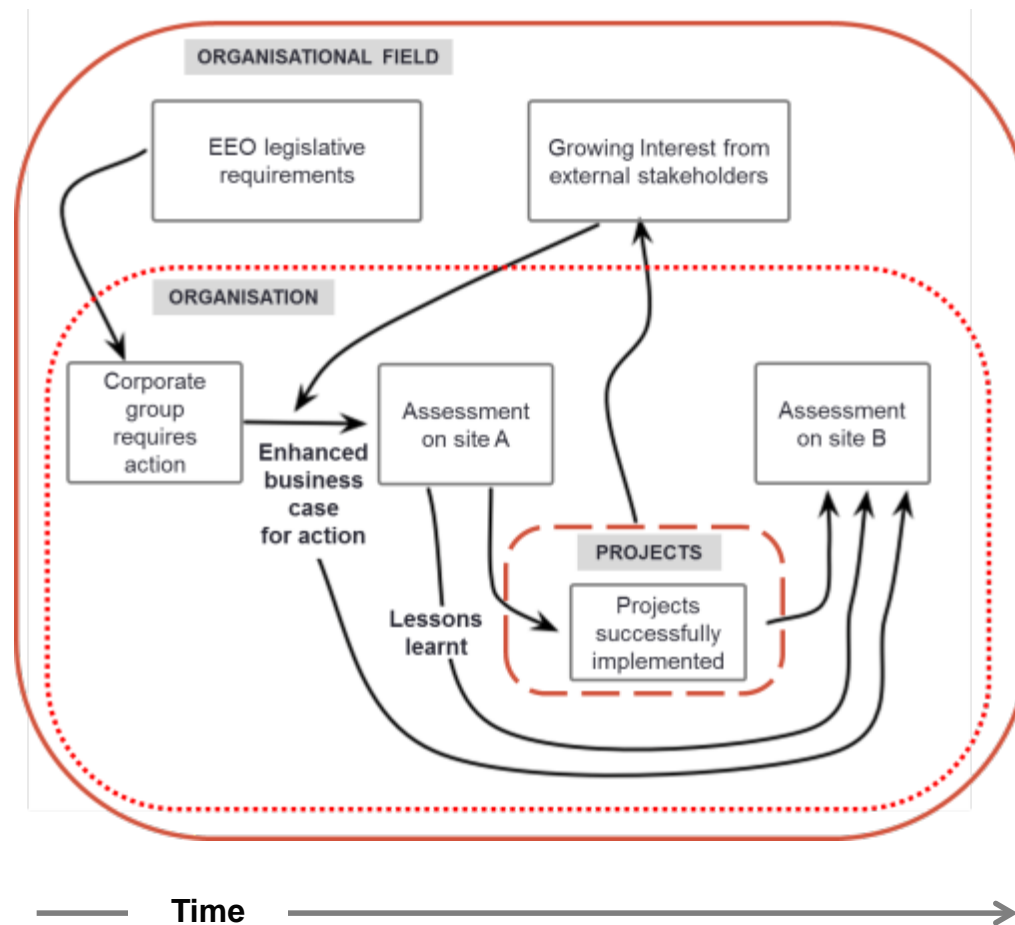
Source: Crittenden 2013, PhD Thesis DRAFT

Over time, leading organisations have improved their focus on multiple benefits – delivering improved results.

- The next slide depicts the application of ‘new’ energy management practices amongst sample of ‘leaders’ -



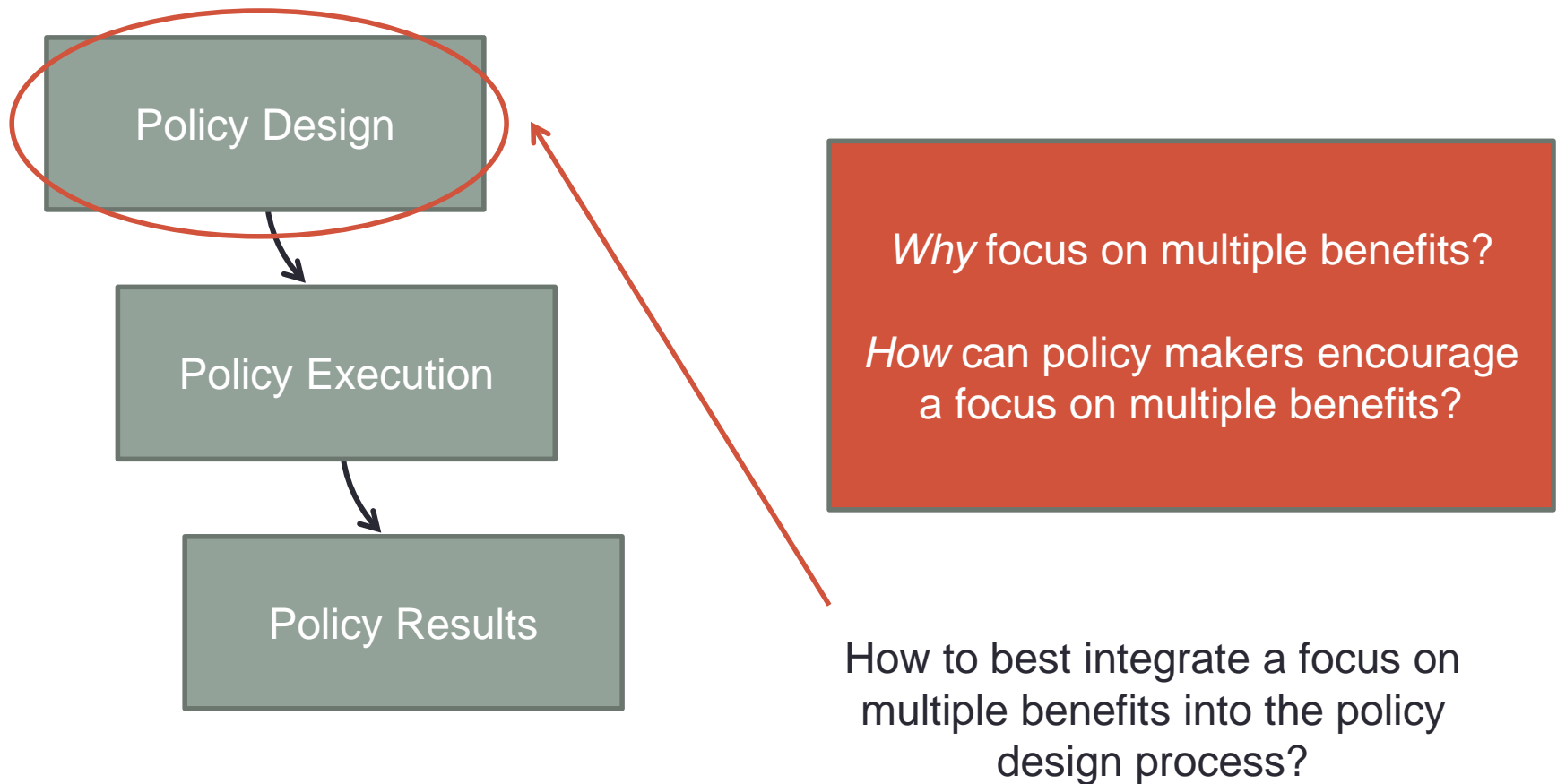
# Learning cycle from one assessment to the next



## Other design features of the Energy Efficiency Opportunities Act that encourage a focus on multiple benefits

- Organisations required to account for multiple costs and benefits when evaluating projects
- Peer to peer learning events and case studies enable good practices examples to be shared
- Organisations not explicitly required to use a consultant *but* do have to involve people with relevant expertise
- Requirement to involve decision makers appropriate to the project being considered
- Reporting to an organisation's board and the public increases visibility and engagement of senior management

# Linking policy design, execution and results – Mongolian context





# Key benefits associated with the proposed Mongolian energy efficiency legislation

Benefit	Description
<b>ECONOMIC BENEFITS</b>	
Energy reductions and cost savings	Lower energy use and associated costs for businesses
Business productivity and competitiveness	Energy efficiency projects typically deliver non-energy business benefits that lead to improved productivity and competitiveness for businesses
Energy security	Lower demand leading to fewer supply interruptions and a relative reduction in electricity imports
Reduced energy-related public expenditures	Lower subsidy payments from government on electricity supply
Energy provider and infrastructure benefits	Fewer supply interruptions and infrastructure expenditures
<b>SOCIAL BENEFITS</b>	
Health / air quality	Reduces air pollution and health impacts associated with electricity generation
Job creation	Employment of energy managers, energy auditors, trainers and personnel associated with implementation of identified projects
<b>ENVIRONMENTAL BENEFITS</b>	
Reduced greenhouse gas emissions	Reduces greenhouse gas emissions at the electricity generation source
Reduced air/water pollutants	Reduces air and water pollutants at the electricity generation source

Source: Crittenden Report, August 2013

# Survey of industry energy management practices to obtain baseline information

- 325 of largest energy using entities in Mongolia responded
- Conducted in April/May 2013
- Provides an opportunity to understand which issues are of most relevance to industry
- Establishes a baseline of energy management practices that can be compared with subsequent surveys to fine tune policy implementation and to support evaluation
- Contributed towards development of the regulatory impact assessment

## Note:

The assistance and support of GIZ, the Mongolian Ministry of Energy & Ulaanbaatar University is acknowledged. Enkhtuya Gombosuren and Sven Ernedal in particular provided valuable input and coordination of this research.

# Example: Impact of supply interruptions

- 290 respondents stated that their entity had experienced interruptions to their energy supply. Only 35 entities had not experienced any interruptions
- Interruption to the energy supply has an economic impact
  - 144 respondents highlighted that energy supply interruptions would create an additional budgetary cost
  - 95 respondents suggested that an interruption would decrease sales
- Energy efficiency assessments proposed in the law can help companies understand their energy use and therefore reduce the impact of supply interruptions.

# Some conclusions

1. Productivity benefits are difficult to quantify and yet they are likely to be substantial
2. 'Multiple benefits assessment' should be incorporated into training and education programs
3. Programs can incorporate a requirement that project evaluation incorporates 'all business benefits' rather than simply energy cost savings.
4. The productivity benefits of energy efficiency should be communicated clearly using country and industry specific examples
5. Peer-to-peer learning events provide a powerful means of legitimizing new energy management practices such as those required to incorporate 'multiple benefits'

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